

Remarks

Claims 1-3, 5-21 and 29 were pending in the subject application. Submitted herewith is a Request for Continued Examination (RCE) under 37 CFR §1.114 for the subject application. By this Amendment, claims 1, 6, 9, 15, 17, 18, and 21 have been amended, claims 5, 7, and 8 have been cancelled, and new claims 30 and 31 have been added. Support for the new claims and amendments can be found throughout the subject specification and in the claims as originally filed. Entry and consideration of the amendments presented herein is respectfully requested. Accordingly, claims 1-3, 6, 9-21 and 29-31 are currently before the Examiner for consideration. Favorable consideration of the pending claims is respectfully requested.

Claims 1-3, 5-12 and 17-21 are rejected under 35 USC §102(b) as anticipated by Schwandt *et al.* (2001). Claim 13 is rejected under 35 USC §103(a) as obvious over Schwandt *et al.* (2001) in view of Kiode *et al.* (U.S. Patent No. 5,445,725). Claims 14 and 29 are rejected under 35 USC §103(a) as obvious over Schwandt *et al.* (2001) in view of Kiode *et al.* (U.S. Patent No. 5,445,725), as evidenced by Ferro (2008). Claims 15 and 16 are rejected under 35 USC §103(a) as obvious over Schwandt *et al.* (2001) in view of Kiode *et al.* (U.S. Patent No. 5,445,725) and further in view of Bode (U.S. Patent No. 4,174,258). Applicants respectfully traverse these grounds of rejection.

Applicants respectfully assert that the cited references, whether taken alone or in combination, do not teach or suggest the claimed invention. As the MPEP states, “The disclosure in an assertedly anticipating reference must provide an enabling disclosure of the desired subject matter; mere naming or description of the subject matter is insufficient, if it cannot be produced without undue experimentation” citing *Elan Pharm., Inc. v. Mayo Found. For Med. Educ. & Research*, 68 USPQ2d 1373 (Fed. Cir. 2003) (see MPEP §2121.01). The disclosure is “enabling” only if it places the public in possession of the claimed invention. *In re Donohue*, 226 USPQ 619 (Fed. Cir. 1985) (“Such possession is effected if one of ordinary skill in the art could have combined the publication’s description of the invention with his own knowledge to make the claimed invention.”). Applicants respectfully assert that the Schwandt *et al.* reference does not constitute an enabling disclosure for purposes of novelty and obviousness under 35 USC §§102 and 103. Applicants assert that the Schwandt *et al.* reference provides no information at all regarding the

oxygen content of the reference material and provides very limited information concerning the reference material itself. The Abstract of the Schwandt *et al.* reference states that a reference hydrogen partial pressure is generated by “an encapsulated solid metal/hydrogen mixture”, and the section entitled “The Novel Hydrogen Analyser” states that the electrolyte is a calcium zirconate partially substituted with indium oxide, covered with thin porous platinum layers on each surface, and that the electrode “is in contact with an encapsulated solid state hydrogen reference”. The text of the Schwandt *et al.* reference then states that the reference is “a zirconium/hydrogen mixture” and mentions that a fixed hydrogen partial pressure can be obtained using a two-phase area consisting of beta and delta zirconium. No other information in the Schwandt *et al.* reference is provided concerning the construction of the reference material or the electrolyte. Thus, Applicants respectfully assert that the Schwandt *et al.* reference does not constitute an enabling disclosure that places the public in possession of the claimed invention. Moreover, the secondary references cited under the § 103 rejections fail to cure the deficiencies of the Schwandt *et al.* reference. Therefore, the Schwandt *et al.* and other references cited in the Office Action do not anticipate or render obvious Applicants’ claimed invention.

Applicants note that the claims have been amended herein to delete reference to the “predetermined” content and/or spatial distribution of oxygen, and the solid electrolyte being “substantially” chemically stable. Applicants further note that the independent claims have been amended herein to clarify and add further features that two phases of the metal/hydrogen are present, and that the oxygen activity in the reference material is sufficiently low that the two phases are retained during hydrogen concentration measurement. Support for these elements can be found, for example, in claim 5 and in the subject specification at page 5, lines 10 and 11, and page 7, lines 4 and 5.

Applicants also note that on page 4 of the Office Action, the Examiner refers to claims 7 to 10 and states that “when heated the calcium and calcium hydride of the reference standard will react with any oxygen present at the interface between the electrolyte and electrode...” (emphasis added). This appears to be a clerical error. Applicants note that the reference standard does not contain calcium. It appears that the Examiner may be confusing the subject invention with one of the other cited references (*e.g.*, Tiwari) discussed in the previous Office Action, which used a calcium-based

reference material. In that case, the calcium reference material was used in combination with a solid-state electrolyte such as calcium hydride, such that the reference material and the electrolyte were thermodynamically stable in each other's presence. This is not comparable to the present invention, as explained in Applicants' response to the previous Office Action.

In view of the above, Applicants respectfully assert that the claimed invention is novel and nonobvious over the cited references. Accordingly, reconsideration and withdrawal of the rejections under 35 USC §102(b) and 35 USC §103(a) is respectfully requested.

It should be understood that the amendments presented herein have been made solely to expedite prosecution of the subject application to completion and should not be construed as an indication of Applicants' agreement with or acquiescence in the Examiner's position.

In view of the foregoing remarks and amendments to the claims, Applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

Applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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